Listing of Claims:

1. - 20. (Canceled)

21. (Currently Amended) A method of converting heat energy generated in an evaporator to mechanical energy by expanding an evaporated working fluid comprising the steps of:

evaporating a working fluid in the evaporator; ~~and~~

expanding the evaporated working fluid in a low-pressure expansion device, wherein the low-pressure expansion device is a roots blower ~~having triple blade rotors~~ arranged and dimensioned so that the working fluid is expanded therein and heat energy is transformed to mechanical energy; and

condensing the expanded working fluid in a heat exchanger and injecting at least a portion of the condensed working fluid into the roots blower during the expansion of further working fluid.

22. - 23. (Canceled)

24. (Currently Amended) The method of claim ~~23~~ 21, wherein at least a portion of the injected working fluid condenses a portion of the evaporated working fluid in the roots blower due to heat exchange, thereby reducing an output pressure of the roots blower.

25. (Currently Amended) The method of claim ~~23~~ 21, wherein the injected working fluid is pressure-controlled during said step of injecting.

26. (Currently Amended) The method of claim ~~22~~ 21, further comprising the step of feeding the condensed working fluid into the evaporator using a pump.

27. (Currently Amended) The method of claim ~~22~~ 21, further comprising the step of extracting a portion of the condensed working fluid for injection into the roots blower using a separator arranged downstream of the heat exchanger.

28. (Previously Presented) The method of claim 21, wherein the working fluid is a mixture including first and second components, the method further comprising absorbing, by an absorption fluid, the first component of the working fluid in or downstream of the low-pressure expansion device, and transferring heat to the second component during said step of absorbing, the heat being recyclable.

29. (Previously Presented) The method of claim 28, wherein the mixture forms an azeotropic mixture having a minimum boiling point at a certain mixing ratio of the components.

30. (Previously Presented) The method of claim 28, wherein the working fluid is an azeotropic mixture or a nearly azeotropic mixture.

31. (Previously Presented) The method of claim 28, wherein the heat transferred during absorption heats the second component to a temperature above the boiling point of the mixture, and wherein the second component is condensed in a heat exchanger.

32. (Previously Presented) The method of claim 28, wherein the absorption fluid is a reversibly immobilizable solvent which, in a non-immobilized aggregate state, is the first component of the working fluid.

33. (Previously Presented) The method of claim 21, wherein the working fluid is an azeotropic mixture of water and silicone.

34. (Previously Presented) The method of claim 28, wherein the absorption fluid is a silicate solution.

35. (Currently Amended) An expansion device for converting heat energy to mechanical energy by expanding an evaporated working fluid received from an evaporator, said expansion device comprising:

a low-pressure expansion device ~~designed~~ configured as a roots blower including at least one injection opening ~~having triple-blade rotors~~, and arranged and dimensioned for expanding an evaporated working fluid received from the evaporator and thereby converting heat energy to mechanical energy; and

a heat exchanger configured to condense the expanded working fluid and to inject at least a portion of condensed working fluid into the roots blower during the expansion of further working fluid.

36. (Previously Presented) The expansion device of claim 35, further comprising a generator coupled to said roots blower.

37. (Canceled)

38. (Previously Presented) The expansion device of claim 35, wherein said roots blower has multi-blade rotors.

39. (Currently Amended) A system for converting heat energy to mechanical energy by expanding an evaporated working fluid, comprising:

an evaporator evaporating a working fluid; ~~and~~

an expansion device comprising a roots blower including at least one injection opening ~~having triple blade rotors~~ connected for receiving the evaporated working fluid from said evaporator, said expansion device expanding the evaporated working fluid and converting heat energy generated in the evaporator to mechanical energy; and

a heat exchanger configured to condense the expanded working fluid and to inject at least a portion of condensed working fluid into the roots blower during the expansion of further working fluid.

40. (Canceled)

41. (New) The method of claim 23, wherein the low-pressure expansion device is a roots blower having triple blade rotors.

42. (New) The expansion device of claim 35, wherein the low-pressure expansion device is a roots blower having triple blade rotors.

43. (New) The system of claim 39, wherein the low-pressure expansion device is a roots blower having triple blade rotors.